

**Before the  
Federal Communications Commission  
Washington, D.C. 20054**

In the Matter of	)	
	)	
Amendment of Part 90 of the	)	WT Docket No. 11-69
Commission's Rules to Permit	)	
Terrestrial Trunked Radio (TETRA)	)	
Technology	)	

**COMMENTS OF  
POWERTRUNK, INC.**

PowerTrunk, Inc. ("PowerTrunk") hereby submits these comments regarding to the Notice of Proposed Rule Making ("NPRM") to modify the Commission's rules to permit the certification and use of Terrestrial Trunked Radio (TETRA) equipment under Part 90.

The NPRM proposes a new Section 90.221 in the clause 4 of the Appendix A, where it establishes that operations using equipments designed to operate with a 25 KHz channel bandwidth may be authorized up to a 22 KHz bandwidth if the equipment meets the Adjacent Channel Power ("ACP") limits shown in 90.221 (b) and 90.221 (c). The NPRM proposes that these ACP limits must be met using a measurement bandwidth of 25 KHz.

The limits in 90.221 (b) and 90.221 (c) for ACP are equal to those specified in the ETSI TETRA standard, EN 300 392-2. ETSI test procedure for ACP establishes that a Root Raised Cosine ("RRC") filter with an equivalent bandwidth of 18 KHz and a roll-off factor of 0.35 must be used<sup>1</sup>. This measurement method is different to that proposed in the NPRM (25 KHz measurement bandwidth).

The ACP values obtained using these two measurement methods are different. When the method proposed by the NPRM is used, the ACP values are higher and the limits of 90.221 (b) and 90.221 (c) could not be suitable<sup>2</sup>.

Therefore, PowerTrunk proposes:

- to establish the same measurement method than ETSI if the same limits are used;
- or
- to review the proposed limits according to the measurement bandwidth of 25 KHz.

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<sup>1</sup>See ETSI EN 300 394-1, clause 8.3 for ACP measurement method and ETSI EN 300 392-2 clauses 5.6 and 5.7 for TETRA filter definition.

<sup>2</sup>See ACP measurement examples in Annex I.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Jose Martin", enclosed within a large, stylized circular flourish.

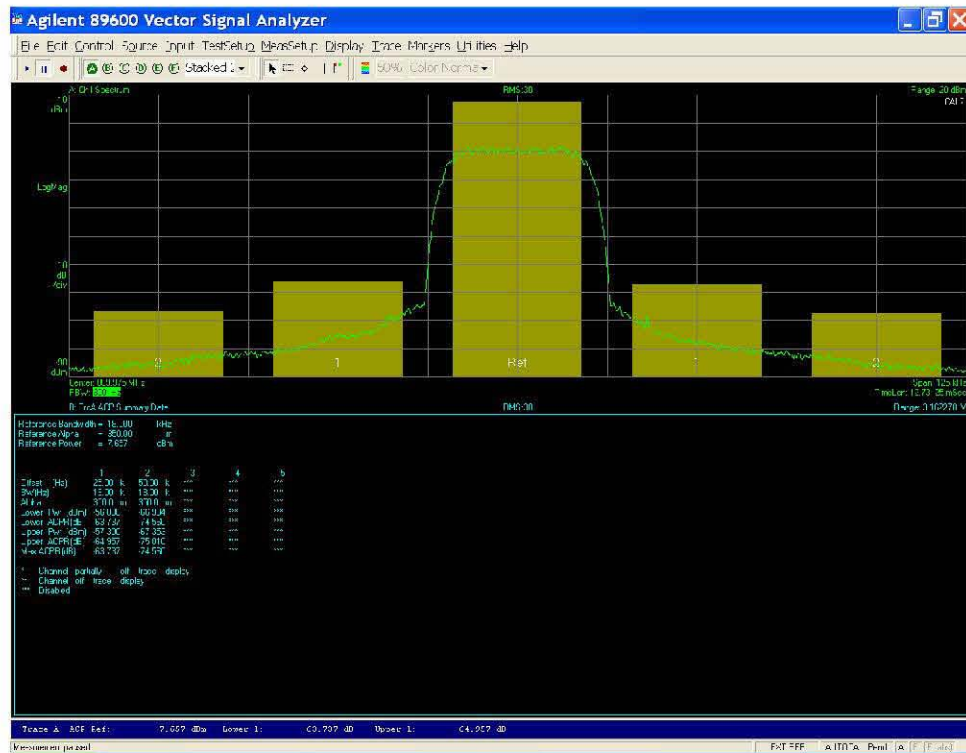
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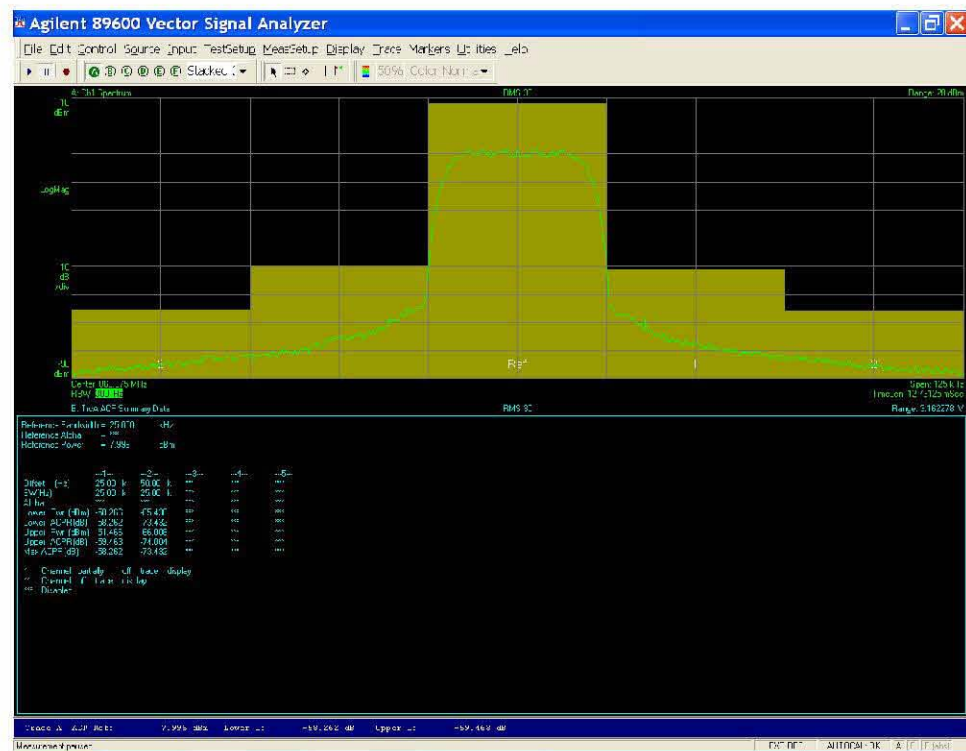
Jose Martin  
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## ANNEX I

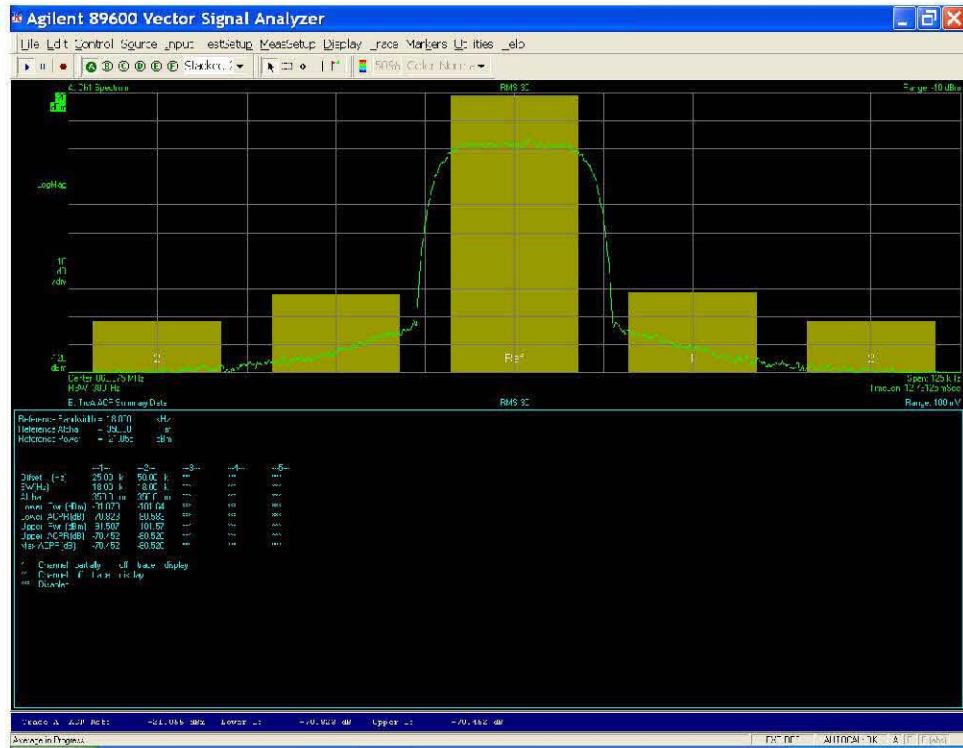
**Plot 1:** ACP measurement of a TETRA equipment using TETRA filter (ETSI).  
 $ACP_{\pm 25KHz} = -63.73dBc$ ;  $ACP_{\pm 50KHz} = -74.56dBc$



**Plot 2:** ACP measurement of a TETRA equipment using 25 KHz Bandwidth integration.  
 $ACP_{\pm 25KHz} = -58.26dBc$ ;  $ACP_{\pm 50KHz} = -73.43dBc$



**Plot 3:** ACP measurement of an Agilent ESG Signal Generator using TETRA filter (ETSI).  
 $ACP_{\pm 25\text{KHz}} = -70.45\text{dBc}$ ;  $ACP_{\pm 50\text{KHz}} = -80.52\text{dBc}$



**Plot 4:** ACP measurement of an Agilent ESG Signal Generator using 25 KHz bandwidth integration.  
 $ACP_{\pm 25\text{KHz}} = -46.63\text{dBc}$ ;  $ACP_{\pm 50\text{KHz}} = -79.45\text{dBc}$

